Now showing on your local trees: spruce bark beetles and Ips beetles

by Ed Berg

It's bark beetle time once again on the Peninsula. Have you noticed the little piles of rusty sawdust and pitch bubbles on your spruce trees? If you take a stout knife and dig under the bark, you can follow the grooved channel in the inner bark and find a mother beetle at work laying her eggs.

In the central peninsula, we are seeing a lot of the engraver (Ips) beetle, which is a smaller and less deadly cousin of our infamous spruce bark beetle *Dendroctonus rufipennis*. If you examine a recently downed tree, say from winter logging or firewood cutting, you may see dozens of little piles of rusty sawdust on top of the log.

Ips likes warm places, such as the top of a log or the sunny side of a tree. It can be alarming to see all these beetle borings on a log in your yard. If these were spruce bark beetles in such densities, you could pretty well kiss the rest of your forest goodbye.

Like the spruce bark beetle, Ips is eating the sweet inner bark, where the tree's sugars are concentrated. Fortunately, Ips rarely kills a mature tree because it prefers to attack the top of trees, and it doesn't seem to attack in such large numbers as the spruce bark beetle.

If you are concerned about beetle activity in your trees, it helps to learn to distinguish the spruce bark beetle and Ips in order to achieve some peace of mind. Dig out some beetles with a knife and examine them with a strong magnifying glass. Ips are three millimeters (1/8 inch). Their back end has a pushed-down look, as if they had been rear-ended by a bigger vehicle. Furthermore, they have several spines in a vertical row on either side of the pushed-down area.

These spines look like finned taillights on a 1950s hotrod car. The taillights are hard to miss, once you have seen them. There are many species of Ips, but they all have taillights. The spruce bark beetle, on the other hand, is larger at five millimeters (1/5 inch), and has a nice, well-rounded rear end, reminiscent of, say, a '49 Ford.

We have set up two beetle trapping stations near the refuge headquarters this spring, under the guidance of retired Forest Service entomologist Skeeter Werner. The traps are baited with potent attractants (called pheromones), as well as woody-smelling turpentine and alcohol.

If beetles were abundant, we could potentially be catching hundreds of beetles per week per trap. But, in fact, we are doing quite poorly: we have been catching about a half-dozen spruce bark beetles per week, and no more than five Ips. If we had more recently downed trees in our woods, we would probably be seeing more Ips. In any case, I am quite pleased to see the spruce bark beetles in short supply because they are the primary offenders.

To be fair, I shouldn't let Ips off scot-free in this discussion. Ips will often successfully attack and kill small trees (say three-five inch diameter) on the peninsula, and they can finish off a tree that has already been weakened by previous spruce bark beetle damage. In the Interior, Ips is more aggressive and often turns treetops red along the big river flood plains with flood-downed trees, as well as at logging sites with leftover slash.

Waiting in the wings in the Russian Far East is a real trouble-maker—*Ips typographus*, which is considered hands down the most destructive bark beetle in the forests of Europe and northern Asia. This has not yet been detected in Alaska, but it is definitely one exotic pest that we don't want to see anytime soon.

In short, don't panic if you see a lot of beetle sawdust piles on your downed logs right now. Get out the magnifying glass and look for the taillights on the beetle butts; the sawdust may look bad, but if it's only Ips, your trees should survive.

Additional information on bark beetles can be found on his *Cycles of Nature* Websiteathttp://chinook.kpc.alaska.edu/~ifeeb/cycles/cycles_index.html.

Ed Berg has been the ecologist at the Kenai National Wildlife Refuge since 1993.For more information about the Refuge, visit the headquarters in Soldotna, call (907) 262-7021. Previous Refuge Notebook columns can be viewed on the Web at http://kenai.fws.gov.